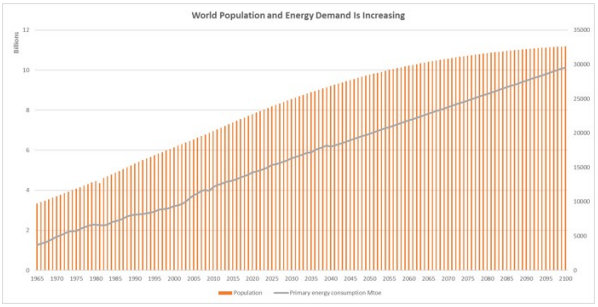
The G7 Summit:
20/20 – A Clear Vision for a World with Energy

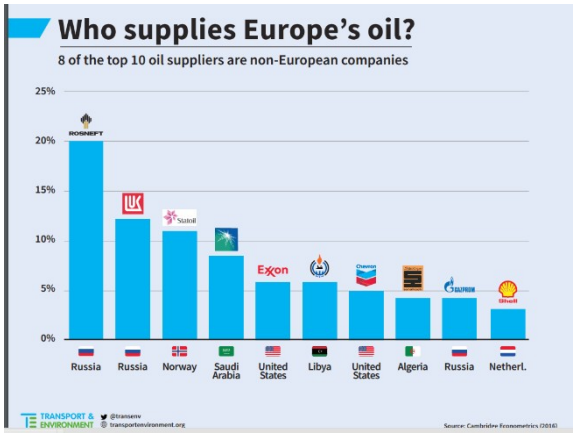
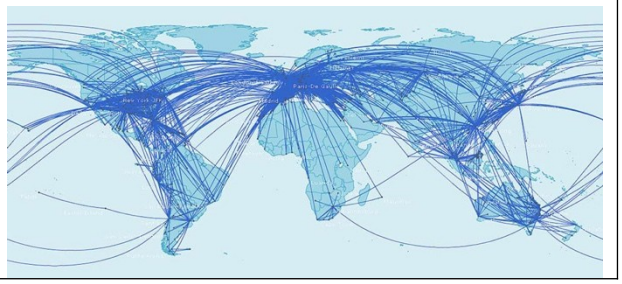
Electricity for everyone — a Proposal for the Greatest Infrastructure Program in World History

VIDEO I: The Vision

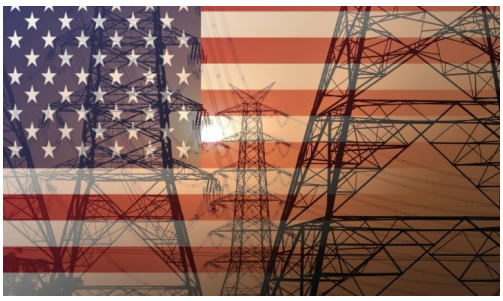
Opening quote from Charlevoix G7 Summit Communique: "The United States believes sustainable economic growth and development depends on universal access to affordable and reliable energy resources. It commits to ongoing action to strengthen the world's collective energy security, including through policies that facilitates open, diverse, transparent, liquid and secure global markets for all energy sources."

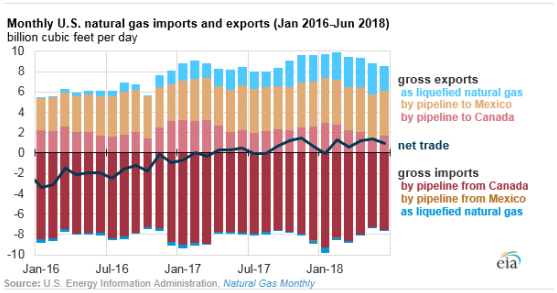
1	The time for capital-intensive, lengthy energy transitions is now. We need to anticipate future needs, demand, and opportunities by looking to a longer time horizon, as the energy needs of a growing world population will continue to rise. The world population was over 2.5 billion in 1950 and is projected to increase from 7.7 billion today to over 10 billion by 2100. Trillions of dollars in infrastructure investment is needed to meet increased energy demand. We must chart a clear course forward and rise to this global challenge.	 *Animated chart showing increase in world population followed by energy demand;* *G20 Global Infrastructure Outlook table showing $90+ trillion needed by 2040*
2	Energy systems are the foundation of economic growth. Growth yields job creation and higher quality of life while	

	development provides citizens with electricity, clean air, clean water, and a healthy environment.	
3	U.S. technology, ingenuity, capital and management have combined to move us from a nation with an energy deficit to one with an energy surplus and exports. **POTUS Speech** (6/29/2017) "For over 40 years, America was vulnerable to foreign regimes that used energy as an economic weapon. Americans' quality of life was diminished by the idea that energy resources were too scarce to support our people. We always thought that, and actually at the time it was right to think. We didn't think we had this tremendous wealth under our feet. Many of us remember the long gas lines and the constant claims that the world was running out of oil and natural gas…the truth is that we have near-limitless supplies of energy in our country. Powered by new innovation and technology, we are now on the cusp of a true energy revolution."	 *Move from photos from 1970s oil shocks (lines of cars) to today's period of energy abundance (fracking, video of Trump "Unleasing American Energy")*

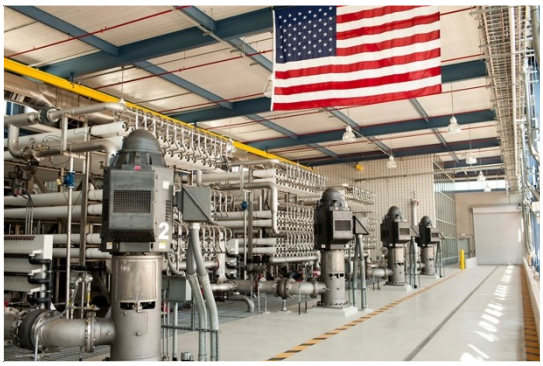
4	Today our energy prominence provides energy security and clean fuels globally, which is key to our global economic and geopolitical leadership.	 *Chart showing U.S. growth in domestic oil and gas production; photo of Sabine Pass export facility*
5	Manufacturing jobs are returning to the United States because of abundant, affordable energy at home.	
6	Our friends in Europe and Asia can diversify their energy economies by importing clean coal, LNG, and oil from the United States.	 *Animation focusing on U.S. suppliers providing more supply* 

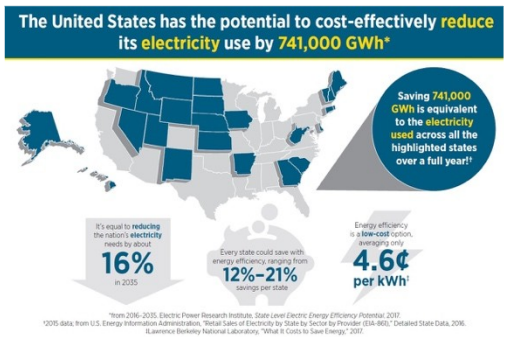
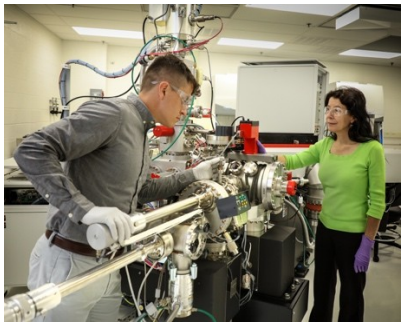
		Animated map, projecting increased LNG shipments to Europe and Asia
7	Nuclear power and integrated energy systems (NICE) can contribute emission-free energy. Advanced and innovative technologies and uses—and these integrated systems—such as those that link nuclear plants with renewables, can accelerate the uses of clean energy.	 *Graphic from INL or ORNL showing hybrid energy system; NICE Future image*
8	Yet, we need to maintain leadership or cede our energy leadership and forfeit opportunities to our global competitors. We face two possible future outcomes:	

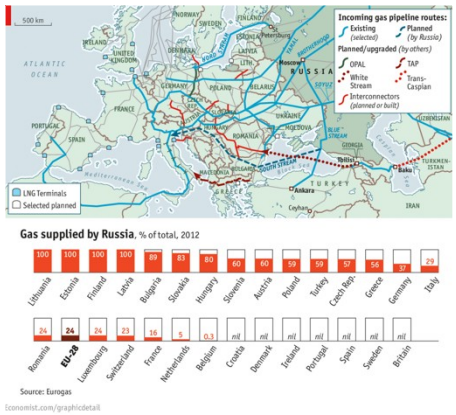
9a	**<u>Outcome 1</u>**: The United States maintains economic, technological, and geopolitical leadership.	

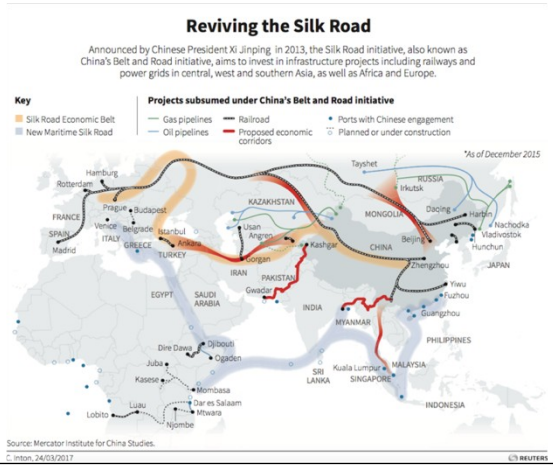
9b	USMCA strengthens collective energy security and consolidates the abundant natural resources of North America– from Mexico to the United States to Canada–as an energy powerhouse.	  *Signing USMCA at G20; EIA chart showing U.S. nat gas exports*
9c	The United States can also promote diversification of energy sources in Central America and Latin America. Cross-border infrastructure and electricity integration can diversify allies away from dependence on Venezuelan oil imports and promote regional economic stability. U.S. support for the Organization of American States strengthens governance standards and transparent, rules-based energy markets.	 *Animation showing T&D network expanding over fading image of Venezuelan oil well*
9d	U.S. LNG exports arrive at hubs in Japan and Europe, diversifying allies' gas dependence;	

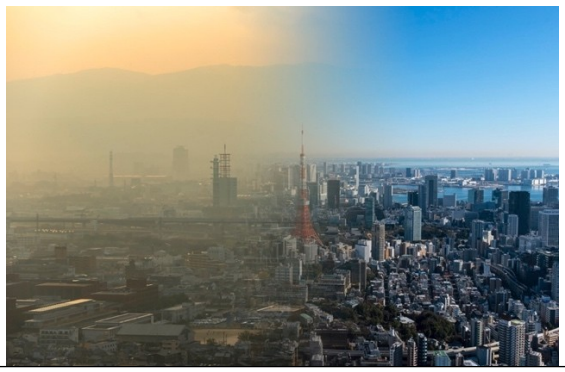
	U.S. clean coal exports provide affordable energy globally; **POTUS Poland Speech (7/6/2017)** "We are committed to securing your access to alternate sources of energy, so Poland and its neighbors are never again held hostage to a single supplier of energy."	 *U.S. deliveries of LNG from 2017 and 2018; map showing hubs in Japan and Singapore; Cove Point photo; video of coal and Trump in Poland*
9e	U.S. oil prominence maintains balanced energy markets globally, reduces price volatility, and avoids monopolistic actors using energy for coercive ends;	
9f	Nuclear power and integrated nuclear/renewable solutions provide economic opportunity for U.S. business and allow positioning for continued attention to nonproliferation in areas such as Middle East and Africa (and nuclear energy for desalinization). **Secretary Perry Quote from meeting with Czechs (11/14/18)**	 *Photo of Perry in India; Westinghouse; map showing growing populations in ME and Africa; photo of SMRs*

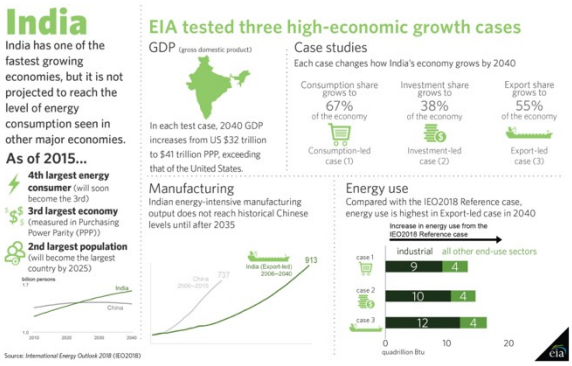
	"What matters is not just having nuclear technology… what matters is whose nuclear technology you will have."	
9g	Clean air and clean water can be achieved by furthering the research of energy efficiency and technological development with the assistance of NICE **POTUS 2017 SOTU Speech** "My administration wants to work with members in both parties to…promote clean air and clear water." OR **POTUS Speech in Las Vegas, NV (9/20/18)** "I'm an environmentalist. I want crystal clean water. I want crystal clean air. That's what we want."	 *Video of blue skies and clean*  *waterways; images or footage of water desalination (like the Kay Bailey Hutchinson plant in El Paso, TX)*
9h	An overall increase in quality of life will be the result of hospitals and institutions that catalyze knowledge; such as schools, libraries, and museums.	

9i	Energy efficient technologies (renewables, building standards, transportation options) assist emerging countries with energy know-how and management. A btu saved is a btu earned.	 *Photos of smart meters and innovative U.S. companies working on smart grids*
9j	Energy infrastructure is a vital element of national economic integration: U.S. will continue to have footprint in many countries helping with production, transportation, transmission and distribution.	
9k	The United States joins with Japan, Canada, France and other countries with highly advanced RD&D programs to collaborate on nuclear energy futures, renewables, and the clean burning of fossil fuels.	
10a	**<u>Outcome 2</u>:** The United States does not replenish its energy inheritance. Competitors take concerted and deliberate action to undermine U.S. leadership.	

10 b	Russia—driven by its political and economic ambitions—intensifies efforts to export gas to Europe and Asia. Russia, sensing weakness, offers attractive, state-sponsored subsidies to export nuclear power plants with focus on opportunities in the Middle East. China's ambitions are reflected in increased nuclear energy exports to Middle East, Africa, and Asia.	 *Animation of Russian gas to Europe; Russia and China flags planting around the world*
10c	Saudi Arabia, Russia and China work together to increase their energy influence by seeking deployment of nuclear power plants in emerging economies with reduced emphasis on safety and nonproliferation concerns.	
10 d	OPEC and Russia work together to exert monopolistic oil/gas policies thereby eroding US influence. (Imagine if Russia, China, Iran, Saudi Arabia joined together to challenge US oil/gas influence.) Would we have $50 per barrel oil today?	

10e	Bottom line: Competing countries that invest in different energy sources globally will dominate the playing field–physically and geographically in international organizations—and at the same time diminish the position of the United States.	 
10f	To continue to be energy dominant, U.S. industry needs to be on the playing field, expanding its profitability while promoting higher standards of life for the world's growing population.	
11a	Benefits and Costs: U.S. energy prominence abroad enhances market transparency, fuel diversification, and ethical business practices around the world. A U.S. presence in nuclear energy markets—as well as a robust domestic fleet—ensures continued promotion of successful nonproliferation norms and safety regimes.	

	Transfer of most efficient electricity generation technologies from Japan, the United States, and Europe can enhance the reliability, efficiency, and cleanliness of electricity offered to the millions of new electricity consumers. LNG exports to hubs in Europe, Asia, and Southeast Asia provide a clean, affordable energy alternative for diversification. Clean coal technology ensures that the world's most dominant and affordable energy source is used in an efficient, environmentally prudent way.	*Map showing growing populations in developing countries; Petra Nova project; Bill's map of different regions*
11 b	Energy infrastructure allows for economic growth and job creation, thereby offering alternatives to extremist strategies for a growing youth population. An enhanced, modern quality of life at home will reduce migration to already stressed areas in Europe and the United States.	
11c	Most importantly, rapid growth in energy infrastructure will reduce pollution in the dirtiest urban areas, thereby providing clean air, clean water and a healthy environment consistent with global environmental objectives.	

11 d	Interrelated issues of water can be integrated into this program, thereby offering a multidimensional, multilateral effort led by the United States.	
11e	U.S. financial and business models can participate in the rapidly expanding electricity markets in India, China, the Middle East, and Africa. U.S. companies and citizens are “on the ground” in key strategic areas of the world, thereby enhancing U.S. prestige. **Secretary Pompeo Speech, [Indo-Pacific Business Forum](#) (7/30/2018)** “Through Asia EDGE, we will invest nearly $50 million this year alone to help Indo-Pacific partners import, produce, move, store, and deploy their energy resources. America’s energy bounty includes vast natural resources, world-leading private firms, sophisticated development-financial tools, and peerless technical expertise. We will draw on all of these to grow sustainable and secure energy markets throughout the Indo-Pacific.”	 *Show growing markets of the future*
12	**The Clock Ticks** We have precious few years to maintain U.S. global	

	leadership in energy. Competitors are on the march with state-sponsored, politically motivated agendas. We recommend that the forthcoming 2020 Summit (which we believe should be characterized as 20/20) focus on global energy development and the goal of universal electricity for all by 2050. This would create the greatest infrastructure project undertaken in our time—a key element of which will be investment structures to allow market access and financing rather than a global assistance program. In 2020, all G7 nations can join in this goal which enhances global energy access, safeguards the environment, and addresses security concerns.	

To Be A Leader in Energy for the Long Term

Healthy Lives

- More Hospitals
- More Schools
- More Libraries
- More Museums

Clean Air

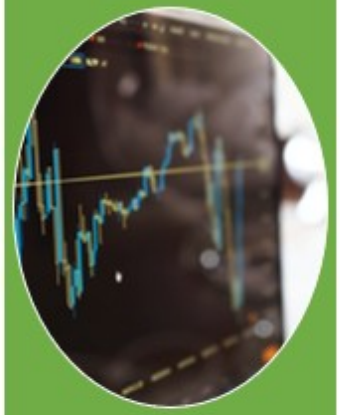
- Utilize clean coal, LNG, and nuclear power
- Research on efficiency on the range of all energies
- Reduction of CO_2 emissions worldwide

Clean Water

- Technology to improve water cleaning
- Desalination

Economic Opportunity

- Increase employment
- Reduce Extremism
- Production of goods in the countries that utilize energy efficiently at a low cost



Healthy Economy

- Fair, better trade
- Stronger diplomatic relations between countries
- Inspire other countries
- Better management of immigration

The energy needed in relation to the increasing demand of the world population